

INTRODUCTION:

Print Manager Plus fully supports running on Microsoft Cluster Services (MSCS) . It allows for the tracking virtual queues hosted within a standard Cluster Group using a standard Print Spooler resource. Both Active/Passive and Active/Active configurations are supported.

PREREQUISITES BEFORE STARTING A CLUSTER INSTALL

Several prerequisites should be reviewed before attempting to install Print Manager Plus.

1. Configure Clustered Print Server:

It is required that a Cluster Group with a Print Spooler resource is configured and brought online before installing Print Manager Plus. Print Manager Plus does not configure Clustered Print Services in any way.

For further information on setting up a Clustered Print Server please refer to MSDN and Technet information.

Recommended Documentation (Valid as of 5/6/2010):

<http://support.microsoft.com/kb/278455>

[http://technet.microsoft.com/en-us/library/cc757083\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/cc757083(WS.10).aspx)

Sample of Configured and Online Print Cluster shown in Cluster Administrator:

The screenshot shows the Cluster Administrator interface for a virtual node named 'VIRTUALNODE (VirtualNode.SSICORP.NET)'. The left pane shows a tree view with 'Print Cluster Group' selected under 'Groups'. The right pane displays a table of resources:

Name	State	Owner	Resource Type	Description
Cluster IP Address	Online	CLUSTER	IP Address	
Cluster Name	Online	CLUSTER	Network Name	
Disk Q:	Online	CLUSTER	Physical Disk	
Spool Drive	Online	CLUSTER	Physical Disk	
Spooler	Online	CLUSTER	Print Spooler	

2. Clustered Printers Installed:

To ensure your cluster is fully operation, it is also recommended in install your Print Queues and set up any driver and sharing options before implementing Print Manager Plus. Once all printing is working as preferred you can proceed to installing Print Manager Plus.

PREREQUISITES BEFORE STARTING A CLUSTER INSTALL (CONT...)

3. **Licensing:**

Print Manager Plus requires a full Server license per each physical node. This key also has to be specially enabled for use with Microsoft Cluster Services.

If you are uncertain as to whether or not your license key supports cluster, and licensed for the number of physical nodes you are using, please contact support before continuing.

4. **Database Options:**

The Print Manager Plus Install provides a variety of database options. However only two configurations are supported for cluster. Below are the two options and their details. A viable SQL Server option would need to be available prior to starting the install.

A. **Remote SQL Instance:**

An instance of Microsoft SQL Server (version 2000 or later) that is running on a separate Server within the same Domain or Forest.

B. **Local Clustered Instance:**

A local instance of Microsoft SQL Server (version 2000 or later) that is fully clustered and will fail over with the Cluster Group that is running your Print Server.

Warning:

Choosing either a Local MS Access database, or Local SQL Express\MSDE Instance on either of the physical nodes is not supported or recommended. This configuration could result in the Print Manager Plus clustered resource and its Cluster Group not being able to fail over properly.

INSTALLING PRINT MANAGER PLUS ON THE PHYSICAL NODES

Once all of the prerequisites are met, you need to install Print Manager Plus on each of the physical cluster nodes.

INSTALLING ON THE FIRST NODE:

1. Enter the License Key:

Run the Setup.exe from the Install to get the install started. You will initially be prompted for a license key. Ensure you have entered your Cluster Enabled license key.

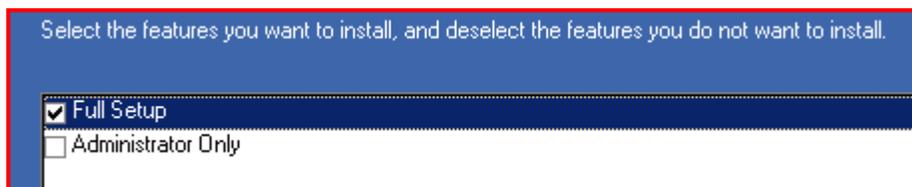


Enter your License Key:

PFDN9-SR6YG-TPXUE-TEADR

2. Specify Full Setup:

Next you will be prompted to accept the License Agreement, Choose an Install Location, and to select a Setup type. Ensure you choose **[Full Setup]**.



Select the features you want to install, and deselect the features you do not want to install.

Full Setup

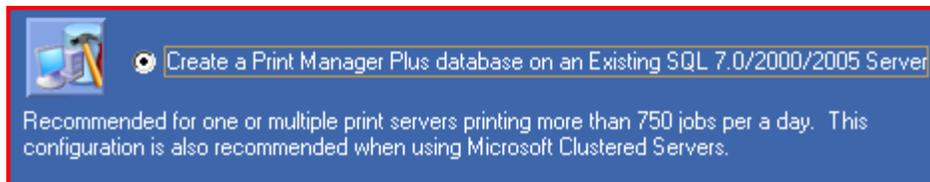
Administrator Only

3. Select the Database Type:

Next you will be prompted to choose a database installation option. You must choose one of the last two options depending on the existing setup. Most commonly the third database option is selected.

[Option C] Create a Print Manager Plus database on an existing SQL Server

Used if this is your first installation of Print Manager Plus on the network. This will allow you to select or type in the name of an existing SQL Server Instance. This can be hosted on another server within the same network, or on a Local Clustered installation of Microsoft SQL Server.



 Create a Print Manager Plus database on an Existing SQL 7.0/2000/2005 Server

Recommended for one or multiple print servers printing more than 750 jobs per a day. This configuration is also recommended when using Microsoft Clustered Servers.

STEP CONTINUED ON NEXT PAGE...

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[Option D] Connect to an Existing Print Manager Plus database

If you already have an existing Print Manager Plus SQL Database from another installation, you can connect and share that same database with your Clustered Installation.

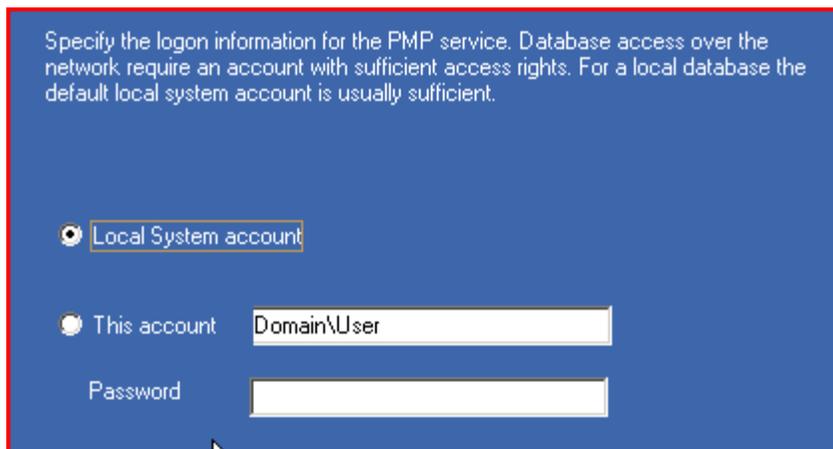


Warning:

The first two options of Local Access and Local SQL Express databases are not supported, or recommended. Please see Prerequisites for more information.

4. Specify a Service Logon Account:

Next you will be prompted for the Print Manager Plus service logon. This service will need a more specific logon, but that can be provided in the next section "Creating the Print Manager Plus Resource". For this step selecting **[Local System Account]** will be sufficient at this time.



5. Select the SQL Server Instance:

You will then need to pick either the SQL Instance you wish to create a Print Manager Plus database on, or the SQL Instance that houses your existing Print Manager Plus database.



6. Finalize the Install:

Finally you be prompted to start the **Install** of files. After several minutes once this finishes you be able to click **[Finish]**.

Reboot: You may be prompted for a reboot of the Physical Node. This is not necessary at this time, but will be necessary before the full tracking of Copies, Color, Duplex, Page Size and other print job details is enabled. It is permitted to finish all Cluster Installation and Setup and then perform reboots when it can be properly scheduled.

INSTALLING ON THE SECOND NODE:

1. Enter the License Key:

Run the Setup.exe from the Install to get the install started on the second node. You will initially be prompted for a license key. Ensure you have entered your Cluster Enabled license key and it is recommended that it is the same key as used on the first node.

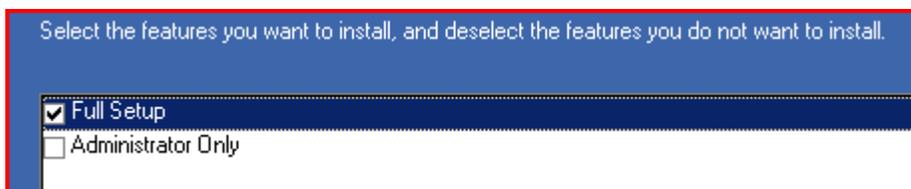


Enter your License Key:

PFDN9-SR6YG-TPXUE-TEADR

2. Specify Full Setup:

Next you will be prompted to accept the License Agreement, Choose an Install Location, and to select a Setup type. Ensure you choose **[Full Setup]**.



Select the features you want to install, and deselect the features you do not want to install.

Full Setup

Administrator Only

3. Select the Database Type:

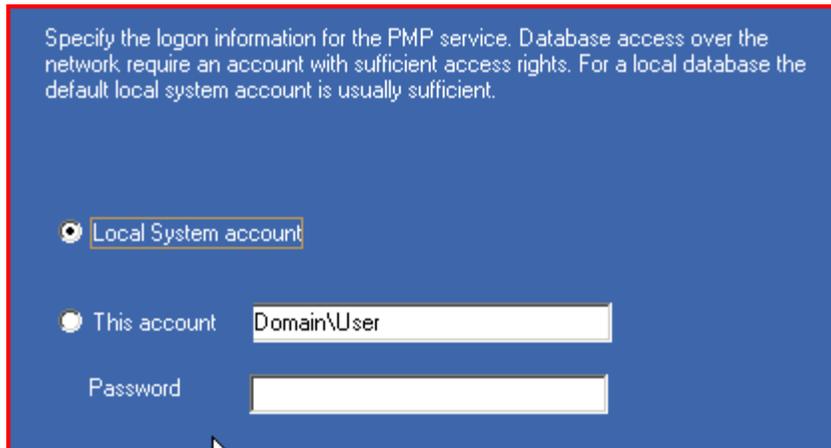
Next you will be prompted to choose a database installation option. On the second node you must choose **[Option D] Connect to an Existing Print Manager Plus database.**



Connect to an Existing Print Manager Plus 7.0 database

4. **Specify a Service Logon Account:**

Next you will be prompted for the Print Manager Plus service logon. This service will need a more specific logon, but that can be provided in the next section "Creating the Print Manager Plus Resource". For this step selecting **[Local System Account]** will be sufficient at this time.



5. **Select the SQL Server Instance:**

You will then need to pick either the SQL Instance. This must be the same SQL Server that was selected on the first node.



6. **Finalize the Install:**

Finally you be prompted to start the **Install** of files. After several minutes once this finishes you be able to click **[Finish]**.

Reboot: You may be prompted for a reboot of the Physical Node. This is not necessary at this time, but will be necessary before the full tracking of Copies, Color, Duplex, Page Size and other print job details is enabled. It is permitted to finish all Cluster Installation and Setup and then perform reboots when it can be properly scheduled.

CREATING THE PRINT MANAGER PLUS RESOURCE

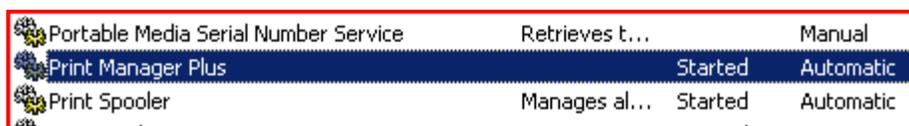
Once Print Manager Plus has been installed on both physical nodes, it is ready to be added as a **Generic Service** resource to your Print Cluster Group. This is not done automatically by Print Manager Plus, but through the following configuration steps using **Windows Services** and the **Cluster Administrator**.

CONFIGURING SERVICES ON PHYSICAL NODES

Perform the following steps on both Physical Cluster Nodes

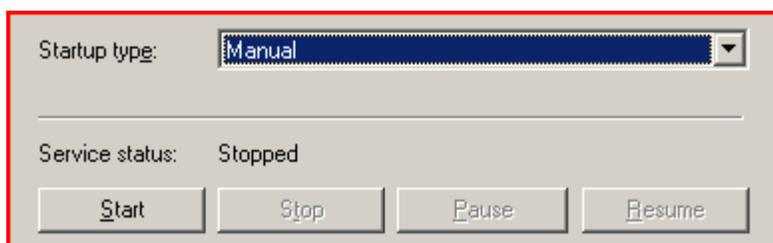
1. Open Service Properties:

On the first physical node, open **Services** within **Administrative Tools**, and open the properties of the **Print Manager Plus** service.



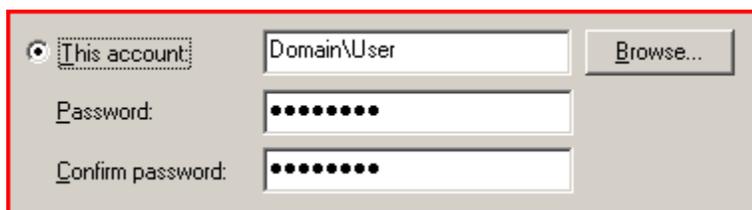
2. Stop the Service and set Service Startup Type:

On the General tab, set the **Startup Type** to manual and then click **Stop** to put the service in a stopped state.



3. Set Service Logon:

Within the **Logon** tab of the service, set the service account to an established Active Directory Domain account formatted in the **Domain\User** format. The account used must have Administrative rights on the physical cluster node, the Microsoft Cluster Group, and DB_Owner rights to the PrintManager database with SQL Server.



ADDING THE PRINT MANAGER PLUS GENERIC RESOURCE

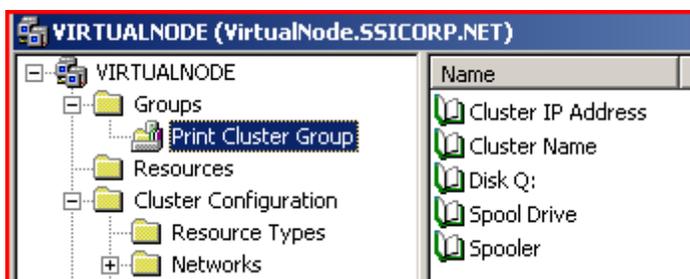
The following steps are performed using the Microsoft Cluster Administrator. The use of Cluster Administrator is beyond the scope of this documentation. If assistance or instruction is needed for using the Microsoft Cluster Administrator, please consult the appropriate Microsoft MSDN, TechNet or other documentation.

Recommended Documentation (Valid as of 5/6/2010):

[http://technet.microsoft.com/en-us/library/cc778977\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/cc778977(WS.10).aspx)

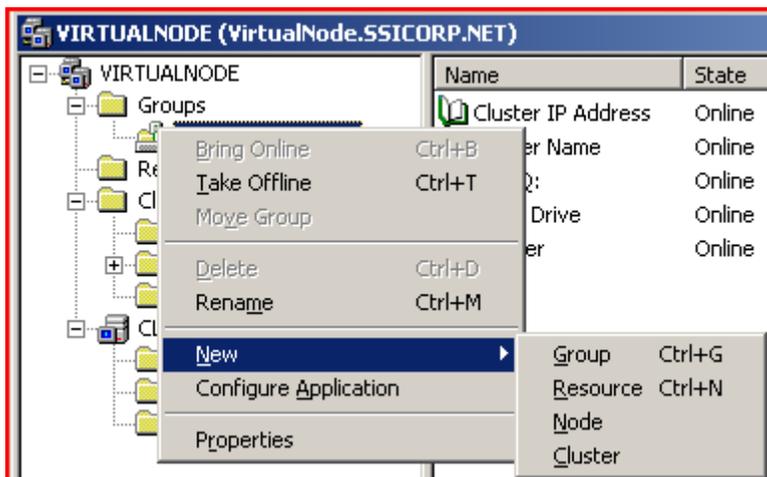
1. The Cluster Administrator and the Print Cluster Group:

Open the Cluster Administrator, and browse to the Groups folder and locate the Cluster Group that contains the Print Spooler resource that you wish to track with Print Manager Plus.



2. Open the Add Resource Wizard:

Right click on the Cluster Group, and choose the **New > Resource** option in the menu.



3. Naming the Resource:

Within the New Resource dialog, you will need to specify the resource Name, Description, Resource Type and Choose the Group. Once done click **[Next]**.

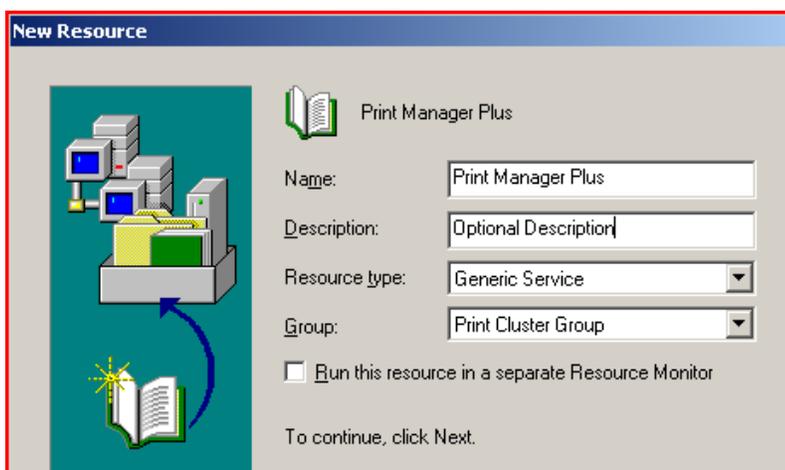
Name: It is recommended the name be Print Manager Plus.

Description: An optional description is allowed.

Resource Type: Generic Service must be selected.

Group: The cluster group that contains the Print Spooler resource must be selected.

Separate Resource Monitor: This setting is optional, and has no impact on PMP



New Resource

Print Manager Plus

Name: Print Manager Plus

Description: Optional Description

Resource type: Generic Service

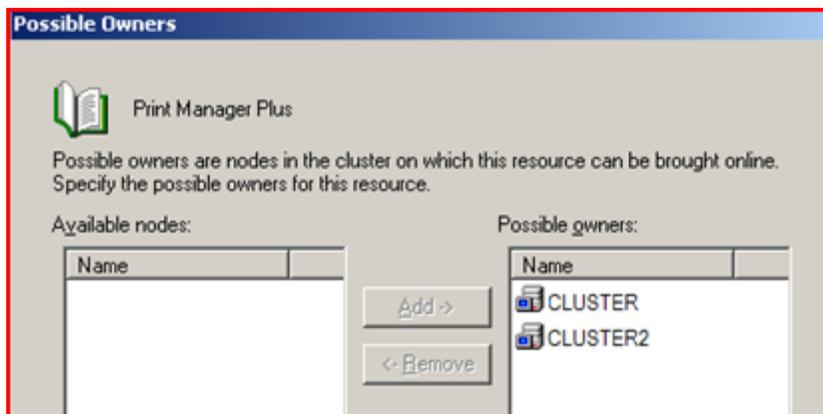
Group: Print Cluster Group

Run this resource in a separate Resource Monitor

To continue, click Next.

4. Specify Owners:

Next you need to specify the possible owners which are the physical nodes you have installed the Print Manager Plus on.



Possible Owners

Print Manager Plus

Possible owners are nodes in the cluster on which this resource can be brought online. Specify the possible owners for this resource.

Available nodes:

Name

Possible owners:

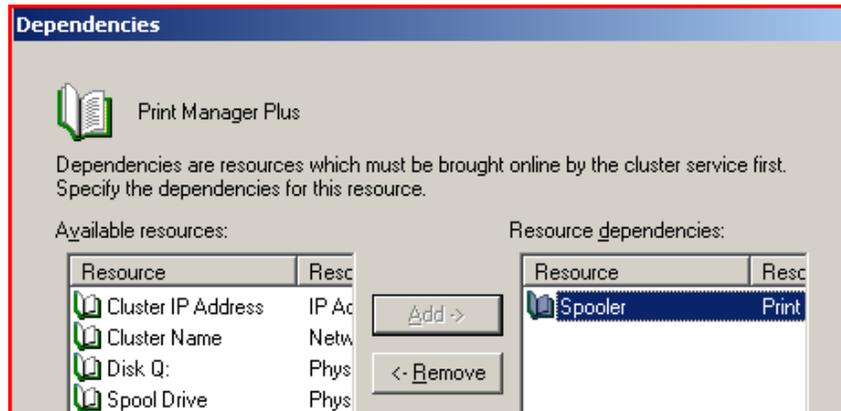
Name
CLUSTER
CLUSTER2

Add ->

<- Remove

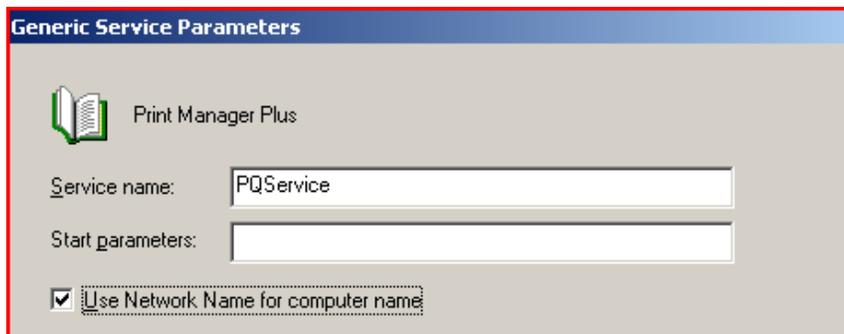
5. Setting Dependencies:

The Print Manager Plus resource will need to depend on the Print Spooler resource within that group. No other dependencies are necessary.



6. Setting the Service Parameters:

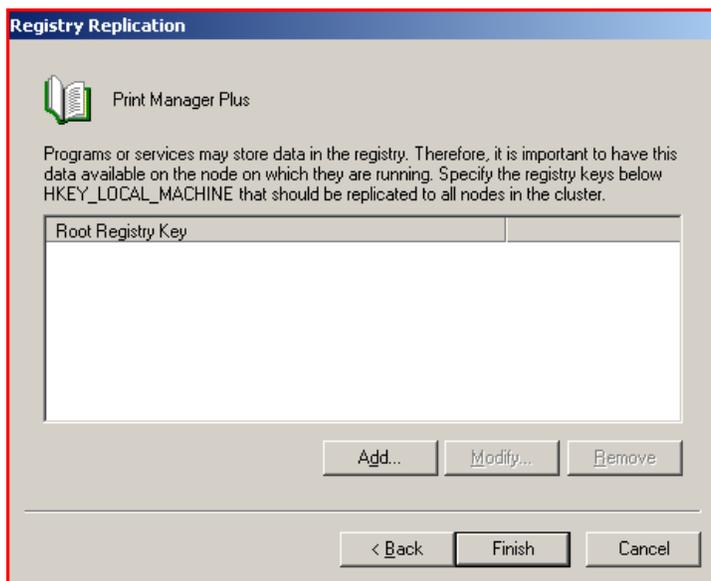
The service name needs to be **PQService** exactly, and **Use Network Name for computer name** must be selected. No startup parameters should be specified.



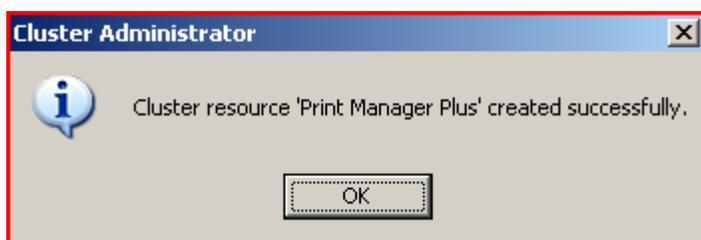
7. Registry Replication and Finishing the Resource:

On the final step of adding the resource, no registry replication should be specified.

Clicking **[Finish]** will finalize the creation of the Print Manager Plus resource.



After clicking Finish, a message should appear indicating the successful creation of the Resource.



8. Verifying the Resource Creation:

The Print Manager Plus resource should now be listed within the Cluster Administrator. Initially it will be in a status of 'Offline' which is normal.

Spool Drive	Online	CLUSTER	Physical Disk	
Spooler	Online	CLUSTER	Print Spooler	
Print Manager Plus	Offline	CLUSTER	Generic Service	Print Tracking and Control

MANAGING THE PRINT MANAGER PLUS RESOURCE ON CLUSTER

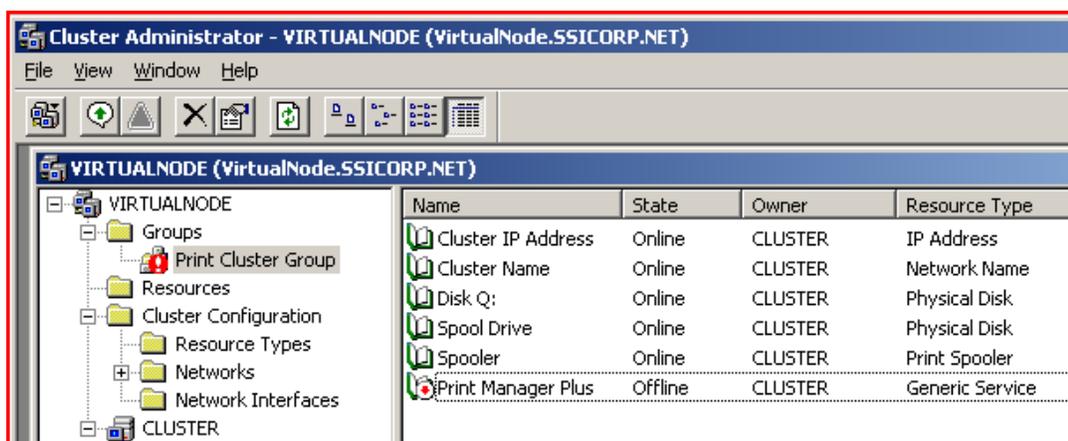
Now that the resource has been created, the following section covers some basic information on managing the resource.

BRINGING THE RESOURCE ONLINE

These steps will bring the Print Manager Plus service resource Online

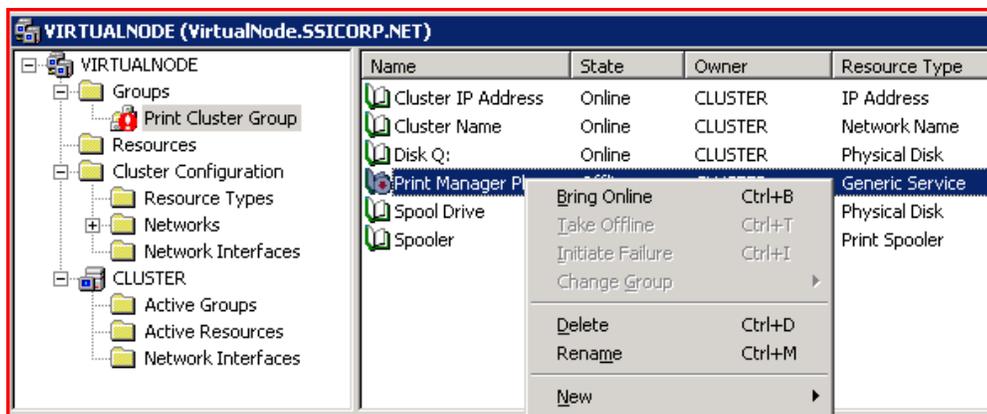
1. Locate the Resource:

Open the Cluster Administrator and select the Cluster Group that contains printing. If the Print Manager Plus resource, or any other resource is Offline, a red exclamation point will be shown indicating that the Cluster Group is **Partially Online**.



2. Bringing the Resource Online:

To bring the Print Manager Plus resource online, right click on the resource which currently be showing "Offline". From the right click menu choose **[Bring Online]**.



RESTARTING THE PRINT MANAGER PLUS SERVICES

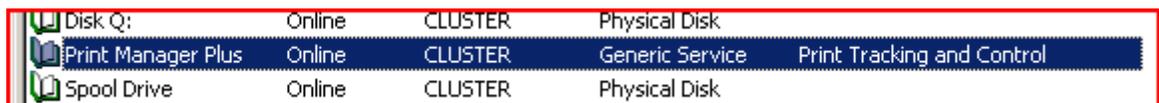
Some changes in Print Manager Plus settings require the restart of its services. Also detecting and tracking new printers requires that the Print Manager Plus service be restarted. These restarts should not be done within Services or the Print Servers tab, but should be done by restarting the Print Manager Plus resource.

Warning:

The Print Manager Plus service on each physical node should not be started or stopped outside of the Cluster Administrator.

1. Locate the Resource:

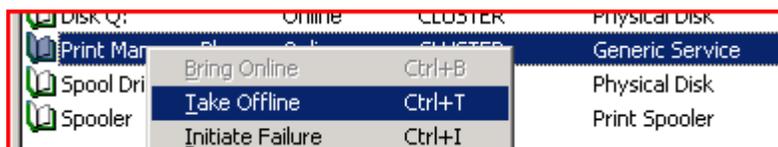
Open the Cluster Administrator and select the Cluster Group that contains printing. The Print Manager Plus resource should be listed as Online.



Disk Q:	Online	CLUSTER	Physical Disk	
Print Manager Plus	Online	CLUSTER	Generic Service	Print Tracking and Control
Spool Drive	Online	CLUSTER	Physical Disk	

2. Stop the Resource:

To stop the resource, right click on it and choose **[Take Offline]**.

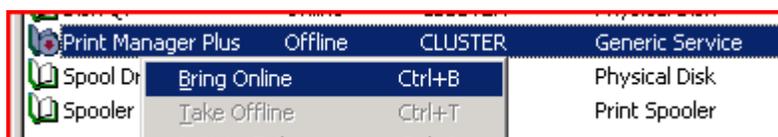


Disk Q:	Online	CLUSTER	Physical Disk
Print Manager Plus	Online	CLUSTER	Generic Service
Spool Drive	Online	CLUSTER	Physical Disk
Spooler	Online	CLUSTER	Print Spooler

Bring Online	Ctrl+B
Take Offline	Ctrl+T
Initiate Failure	Ctrl+I

3. Restart the Resource:

Once stopped, you will need to start the resource again. To do this right click on it and choose **[Bring Online]**.



Print Manager Plus	Offline	CLUSTER	Generic Service
Spool Drive	Online	CLUSTER	Physical Disk
Spooler	Online	CLUSTER	Print Spooler

Bring Online	Ctrl+B
Take Offline	Ctrl+T

UPDATING PRINTMANAGER PLUS

The Updating and Upgrading of Print Manager Plus should not be done using eUpdate when on cluster. Instead a manual upgrade should be obtained from Support, and the following steps followed.

- 1. Obtain the Manual Update/Upgrade:**
To obtain the current manual install which will perform updates and upgrades, please contact support using the information in the footer of this document, or at www.softwareself.com.
- 2. Take the Print Manager Plus resource offline:**
Within Cluster Administrator locate the Print Manager Plus resource and take it offline.
- 3. Select The first Node to Upgrade:**
One physical node (preferably an inactive node) should be selected to perform the upgrade on first. Ensure that this node is not the Online Node for your Print Cluster Group. If it is, please it to another Physical node. See documentation at the bottom of this section on moving groups.
- 4. Run the Update on the First Node:**
Download and run the update over the existing version on the physical node that is not actively running the cluster. Once completed, reboot if prompted.
- 5. Move the Cluster:**
Within Cluster Administrator, move the Group over to the upgraded Physical Node.
- 6. Run the Update on the Second Node:**
Download and run the update over the existing version on the second physical node that is not actively running the cluster. Once completed, reboot that node if prompted.
- 7. Bring the Print Manager Plus resource Online**
Within Cluster Administrator locate the Print Manager Plus resource and bring it online.

Recommended Documentation (Valid as of 6/29/2009):
[http://technet.microsoft.com/en-us/library/cc728134\(W.S.10\).aspx](http://technet.microsoft.com/en-us/library/cc728134(W.S.10).aspx)



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